

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 5. (canceled)

6. (currently amended) A thermoelectric package, comprising:

a microelectronic die having at least one area of which is of a higher heat dissipation rate than the remainder of the microelectronic die when in operation;

an isolation layer formed on said microelectronic die having a thickness of between about 0.1 and 1.0 micron;

a first electrode proximate said microelectronic die including said higher heat area;

a dielectric material proximate said first electrode;

a second electrode opposing said first electrode with said dielectric material disposed therebetween; and

a plurality of nano-wires extending between said first electrode and said second electrode, wherein the plurality of nano-wires comprise a higher density proximate to said area of higher heat dissipation rate, a lower density surrounding the higher density proximate to an intermediate area between said

area of higher heat dissipation rate and said remainder of the microelectronic die, a further lower density surrounding the lower density, and an ~~absense~~ absence of nano-wires proximate to said remainder of the microelectronic die, the higher density, lower density, and further lower density of nano-wires forming concentric ovals.

7. (canceled)

8. (original) The package of claim 6, wherein said at least one nano-wire comprises a bismuth containing material.

9. (original) The package of claim 6, wherein said dielectric material comprises a porous dielectric material.

10. (original) The package of claim 9, wherein said porous dielectric material comprises porous alumina.

11. (original) The package of claim 6, further comprising a negatively charged trace electrically connected to said first electrode and a positively charged trace to said second electrode.

12. – 20. (canceled)

21. (currently amended) An electronic system, comprising:

an external substrate within a housing; and

at least one microelectronic device package attached to said external substrate,

having at least a thermoelectric device including:

an isolation layer having a thickness of between about 0.1 and 1.0 micron;

a first electrode;

a dielectric material proximate said first electrode;

a second electrode opposing said first electrode with said dielectric material deposited therebetween; and

a plurality of nano-wires extending between said first electrode and said second electrode, wherein the plurality of nano-wires comprise a higher density proximate to an area of higher heat dissipation rate of a microelectronic die when in operation, a lower density surrounding the higher density proximate to an intermediate area adjacent to said area of higher heat dissipation rate, a further lower density surrounding the lower density, and an ~~absence~~ absence of nano-wires proximate to a remainder of the microelectronic die, the higher density, lower density, and further lower density of nano-wires forming concentric ovals;

an input device interfaced with said external substrate; and

a display device interfaced with said external substrate.

22. (original) The system of claim 21, wherein said at least one nano-wire comprises a bismuth containing material.

23. (original) The system of claim 21, wherein said dielectric material comprises a porous dielectric material.

24. (original) The system of claim 23, wherein said porous dielectric material comprises porous alumina.

25. (original) The system of claim 21, wherein said thermoelectric device further comprises a negatively charged trace electrically connected to said first electrode and a positively charged trace to said second electrode.